AMENDMENTS TO THE CLAIMS:

Claims 1 - 10 (Canceled)

11. (Currently Amended) A method for determining the position of an object in a system

comprising a sensor arranged at a determinable location, the method comprising:

obtaining a time of arrival for a signal received at the sensor <u>wherein the time of</u>

<u>arrival is obtained from a signal reflected from the object</u>;

calculating a slant range from the object to the sensor based, at least in part, upon

the obtained time of arrival; and

determining a position vector based, at least in part, upon the calculated slant

range and the location of the sensor.

12. (Original) The method of claim 11 wherein the time of arrival is obtained from a signal

transmitted from the object.

13. (Canceled).

14. (Currently Amended) ~~The method of claim 11 wherein calculating the slant range further~~

~~comprises:~~ <u>A method for determining the position of an object in a system comprising a</u>

<u>sensor arranged at a determinable location, the method comprising:</u>

<u>obtaining a time of arrival for a signal received at the sensor;</u>

<u>adding a known distribution of noise to the time of arrival;</u> ~~prior to calculating the~~

~~slant range~~

<u>calculating a slant range from the object to the sensor based, at least in part, upon</u>

<u>the obtained time of arrival and known distribution of noise; and</u>

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determining a position vector based, at least in part, upon the calculated slant

range and the location of the sensor.

15. (Original) The method of claim 14 wherein the known distribution of noise comprises a

Gaussian noise distribution with a variance of σ^2.

16. (Original) The method of claim 11 wherein determining a position vector further comprises:

calculating an error norm for each possible position vector solution; and

selecting as the object position vector the position vector solution with the smallest error

norm.

Claims 17-20. (Canceled)